

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Canceled)

2. (Currently Amended) A thin-film magnetic head according to claim 1,
comprising:

at least either an electromagnetic transducer or a magnetoresistive device; and
a sheet-shaped heater for generating heat when energized, the heater having a heating
part with a predetermined sheet resistance and a lead part which is connected in series to the
heating part and has a sheet resistance lower than that of the heating part,

wherein the heating part and the lead part include an electrically conductive common layer extending from the lead part to the heating part, and the lead part further includes an electrically conductive additional layer provided in contact with the common layer.

3. (Original) A thin-film magnetic head according to claim 2, wherein the additional layer has a sheet resistance lower than that of the common layer.

4. (Original) A thin-film magnetic head according to claim 2, wherein the additional conductive layer contains at least one of Cu, Au, Ni, Co, Ta, W, Mo, Rh, and alloys thereof.

5. (Withdrawn) A thin-film magnetic head according to claim 1, wherein the lead part and the heating part are made of the same material, the lead part having a thickness greater than that of the heating part.

6. (Currently Amended) A thin-film magnetic head according to claim 1,
wherein at least one of the lead and heating parts is formed by sputtering.

7. (Currently Amended) A thin-film magnetic head according to claim 1, wherein the heater thermally expands when energized to cause the electromagnetic transducer or magnetoresistive device to project.

8. (Currently Amended) A thin-film magnetic head according to claim 1, wherein the heating part is formed in a strip having opposite ends, and wherein the heater further comprises a lead part which is connected in series to the heating part and has a sheet resistance lower than that of the heating part, the lead parts are respectively connected to the opposite ends of the heating part.

9. (Currently Amended) A thin-film magnetic head according to claim 1, comprising:

at least either an electromagnetic transducer or a magnetoresistive device; and
a sheet-shaped heater for generating heat when energized, the heater having a heating
part with a predetermined sheet resistance and a lead part which is connected in series to the
heating part and has a sheet resistance lower than that of the heating part,

wherein the heating part is shaped in a strip winding in a rectangular wave pattern.

10. (Currently Amended) A head gimbal assembly comprising:

a support;

a thin-film magnetic head formed on the support; and

a gimbal for securing the support,

wherein the thin-film magnetic head having has at least either an electromagnetic transducer or a magnetoresistive device, and a sheet-shaped heater for generating heat when energized, the heater including a heating part with a predetermined sheet resistance and a lead part which is connected in series to the heating part and has a sheet resistance lower than that of the heating part; and

wherein the heating part and the lead part include an electrically conductive common layer extending from the lead part to the heating part, and the lead part further includes an electrically conductive additional layer provided in contact with the common layer.

11. (Currently Amended) A hard disk drive comprising:

a support;

a thin-film magnetic head formed on the support; and

a recording medium opposing the thin-film magnetic head,

wherein the thin-film magnetic head having has at least either an electromagnetic transducer or a magnetoresistive device, and a sheet-shaped heater for generating heat when energized, the heater including a heating part with a predetermined sheet resistance and a lead part which is connected in series to the heating part and has a sheet resistance lower than that of the heating part; and

wherein the heating part and the lead part include an electrically conductive common layer extending from the lead part to the heating part, and the lead part further includes an electrically conductive additional layer provided in contact with the common layer.

12. (Original) A hard disk drive according to claim 11, wherein the heater thermally expands when energized to cause the electromagnetic transducer or magnetoresistive device to project so that a distance between the recording medium and the electromagnetic transducer or magnetoresistive device is reduced.

13. (New) A head gimbal assembly comprising:

a support;

a thin-film magnetic head formed on the support; and

a gimbal for securing the support,

wherein the thin-film magnetic head has at least either an electromagnetic transducer or a magnetoresistive device, and a sheet-shaped heater for generating heat when energized,

the heater including a heating part with a predetermined sheet resistance and a lead part which is connected in series to the heating part and has a sheet resistance lower than that of the heating part; and

wherein the heating part is shaped in a strip winding in a rectangular wave pattern.

14. (New) A hard disk drive comprising:

a support;

a thin-film magnetic head formed on the support; and

a recording medium opposing the thin-film magnetic head,

wherein the thin-film magnetic head having at least either an electromagnetic transducer or a magnetoresistive device, and a sheet-shaped heater for generating heat when energized, the heater including a heating part with a predetermined sheet resistance and a lead part which is connected in series to the heating part and has a sheet resistance lower than that of the heating part; and

wherein the heating part is shaped in a strip winding in a rectangular wave pattern.